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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,573

12/27/2005

Mats Erlandsson-Warvelin

43315-226097

8602

26694 7590 01/06/2009
VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

EXAMINER

NORTON, JENNIFER L

ART UNIT

PAPER NUMBER

2121

MAIL DATE

DELIVERY MODE

01/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/562,573		ERLANDSSON-WARVELIN ET AL.	
	Examiner		Art Unit	
	Jennifer L. Norton		2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 8-10, 15-26 and 29-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-14, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/27/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-38 are pending. Claim 8-10, 15-26 and 29-38 withdrawn from further consideration by the examiner per telephone conversation with Eric Franklin on 24 October 2008 a provisional election was made without traverse to prosecute claims 1-7, 11-14, 27 and 28.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1-10, drawn to a method of controlling a machine, classified in class 700, subclass 245.
 - II. Claims 15-20, drawn to a system comprising of controlling a machine with a list of all machine positions, classified in class 700, subclass 20.
 - III. Claims 29-34, drawn to a digital signal for communicating control and monitoring data, classified in class 700, subclass 1, 9.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as

a system comprising of controlling a machine with a list of all machine positions. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination III has separate utility such as a digital signal for communicating control and monitoring data. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the

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allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination III has separate utility such as a digital signal for communicating control and monitoring data. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

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4. Group I and II, included a species election. The species pertaining to Groups I and II are as follows:

Group I: Claims 1 is generic to the following disclosed patentably distinct species:

- a) Claims 2-7, 11-14, 27 and 28, drawn to a method of controlling
- b) Claims 8-10, drawn to a method of registering of status of machines with machine identifies

Group II: Claims 15 is generic to the following disclosed patentably distinct species:

- a) Claims 16-20, drawn to a method of changing the status of machines in a register
- b) Claims 21-26, drawn to a sensor means.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Eric Franklin on 24 October 2008 a provisional election was made without traverse to prosecute the invention of Group I, Species a), claims 1-7, 11-14, 27 and 28. Affirmation of this election must be made by applicant in replying to this Office action. Claim 8-10, 15-26 and 29-38 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 recites the limitation "all said machines" in lines 6 and 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,568,593 (hereinafter Demarest).

9. As per claim 1, Demarest discloses a method for controlling a machine to pick up an item from a first position and place the item in a second position (col. 3, lines 56-65), wherein a sensor member provides data on said first position to a control member (col. 4, lines 23-31), the method comprising:

sending a message from a master process of the control member (col. 5, lines 63-67 and Fig. 3(b), element 69) comprising one or more said first positions to all said machines (Fig. 1, element 50a or 50b) controlled by said control member (col. 7, lines 51-53 and 64-67 and col. 8, lines 1-13; i.e. the Robot Control task associated with each robot controller, wherein each Robot Control task manages a respective robot), and

sending a message from said control member to all said machines with an indicator member specifying which of the one or more said first positions shall be used (col. 8, lines 4-13 and Fig. 8(a), element Step 104 and 106).

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10. As per claim 2, Demarest discloses the method according to claim 1, further comprising:

receiving a message (Fig. 8, element 207; i.e. NEEDLE IN GRIPPER signal) from a said machine with a status that a said first position has been used (col. 8, lines 13-15), and

sending a message (Fig. 8, element 191; i.e. SAFE TO PLACE signal) comprising said first position, or more said first positions, to all machines controlled by the control member in which message each said first position is marked with a status of used or not (col. 8, lines 13-20).

11. As per claim 3, Demarest discloses the method according to claim 1, further comprising:

receiving at a said machine the message comprising one or more said first positions, handling one of the one or more of said first positions (col. 8, lines 4-13 and Fig. 8(a), element Step 104 and 106), and

sending a message (Fig. 8, element 207; i.e. NEEDLE IN GRIPPER signal) to the control member comprising the information that a such said first position has been used (col. 8, lines 13-20).

12. As per claim 27, Demarest discloses a computer program comprising computer code means and/or software code portions (i.e. computer software programs) which

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when loaded into a computer or processor (col. 5, lines 63-67 and Fig. 7, element 120) will make the computer or processor (Fig. 7, element 120) perform the steps of a method according to claim 1 (col. 6, lines 44-64).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Demarest.

15. As per claim 4, Demarest teaches the method according to claim 1, further comprising:

updating in said control member the marker of the one said first position to read used (col. 8, lines 34-40 and 47-52; i.e. NEEDLE PLACE COMPLETE received by the PLC).

Demarest does not expressly teach within the same embodiment of steps sending from the control member to all machines a message that the status of the said first position consumed is equal to used.

Demarest teaches sending from the control member to all machines a message that the status of the said first position consumed is equal to used (col. 8, lines 13-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest to teach within the same embodiment of steps to include sending from the control member to all machines a message that the status of the said first position consumed is equal to used to provide an cost effective sorting device that virtually eliminates operators exposure to repetitive manual operations (col. 2, lines 11-13).

16. Claim 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demarest in view of U.S. Patent No. 5,914,880 (hereinafter Yasojima).

17. As per claim 5, Demarest does not expressly teach the method according to claim 1, further comprising: selecting with a control member one or more specific said first positions to be handled by a specific machine.

Yasojima teaches to selecting with a control member (Fig. 3, element 30 of Fig. 2, element 20) one or more specific operation to be handled by a specific machine (col. 4, lines 38-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest to teach selecting with a control member one or more specific operation to be handled by a specific machine to provide improved operability and facilitation of expansion of a transfer machine control apparatus (col. 1, lines 65-67)

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18. As per claim 6, Demarest teaches as set forth above the control member uses a algorithm to select a said first position to be handled by one specific machine of all machines (col. 4, lines 23-31 and col. 12, lines 15-25).

19. As per claim 7, Demarest teaches as set forth above the control member carries out a repeated triggering of a first position (col. 7, lines 64-67 and col. 8, line 1).

20. As per claim 28, Demarest does not expressly teach the computer program product according to claim 27 comprised in one or more computer readable media.

Yasojima teaches to the computer program product in one or more computer readable media (col. 4, lines 65-67 and col. 5, lines 1-2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest to the computer program product in one or more computer readable media to provide improved operability and facilitation of expansion of a transfer machine control apparatus (col. 1, lines 65-67)

21. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demarest in view of Yasojima in further view of U.S. Patent No. 4,580,207 (hereinafter Arai).

22. As per claim 11, Demarest nor Yasojima expressly teach allocating a said

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first position to a specific machine dependent on load balancing for a plurality of machines controlled by the control member.

Arai teaches to allocating a said job to a specific machine dependent on load balancing for a plurality of machines controlled by the control member (col. 5, lines 28-44).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest in view of Yasojima to include allocating a said job to a specific machine dependent on load balancing for a plurality of machines controlled by the control member to improve the production efficiency such as improvement of a utilization factor of the facilities (col. 8, lines 18-21).

23. As per claim 12, Demarest nor Yasojima expressly teach allocating a said first position to a specific machine dependent on load balancing for all of the machines controlled by the control member.

Arai teaches to allocating a job to a specific machine dependent on load balancing for all of the machines controlled by the control member (col. 5, lines 28-44 and col. 6, lines 23-27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest in view of

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Yasojima to include allocating a job to a specific machine dependent on load balancing for all of the machines controlled by the control member to improve the production efficiency such as improvement of a utilization factor of the facilities (col. 8, lines 18-21).

24. As per claim 13, Demarest nor Yasojima expressly teach allocating a said first position to a specific machine dependent on a stoppage that has occurred in a work group controlled by the control member

Arai teaches to allocating a said job to a specific machine dependent on a stoppage that has occurred in a work group controlled by the control member (col. 5, lines 28-44 and col. 6, lines 23-27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest in view of Yasojima to include allocating a said job to a specific machine dependent on a stoppage that has occurred in a work group controlled by the control member to improve the production efficiency such as improvement of a utilization factor of the facilities (col. 8, lines 18-21).

25. As per claim 14, Demarest nor Yasojima expressly teach allocating a said first position to a specific machine dependent on the removal from service of

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another specific machine in the work group controlled by the control member.

Arai teaches to allocating a said first position to a specific machine dependent on the removal from service of another specific machine in the work group controlled by the control member (col. 5, lines 28-44 and col. 6, lines 23-27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Demarest in view of Yasojima to include allocating a said first position to a specific machine dependent on the removal from service of another specific machine in the work group controlled by the control member to improve the production efficiency such as improvement of a utilization factor of the facilities (col. 8, lines 18-21).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to robotic control.

U.S. Patent No. 4,942,512 discloses a robot system having a central control unit for managing the entire operation of the robot system and a plurality of peripheral control modules for controlling the operations of the respective portions of the robot.

U.S. Patent No. 6,804,580 discloses a system for controlling a plurality of robots and a method for controlling said system.

U.S. Patent No. 6,971,161 discloses a method and device for generating component mounting data in view of productivity, quality assurance, safety, or the like, when components are mounted onto a mounting target, and a component mounting method and device by which a mounting operation can be performed based on the data.

U.S. Patent No. 7,024,250 discloses a method for the synchronous control of several manipulators, such as several industrial robots.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is (571)272-3694. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. I

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Albert DeCady/
Supervisory Patent Examiner
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